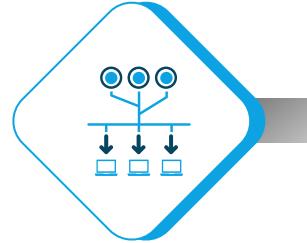
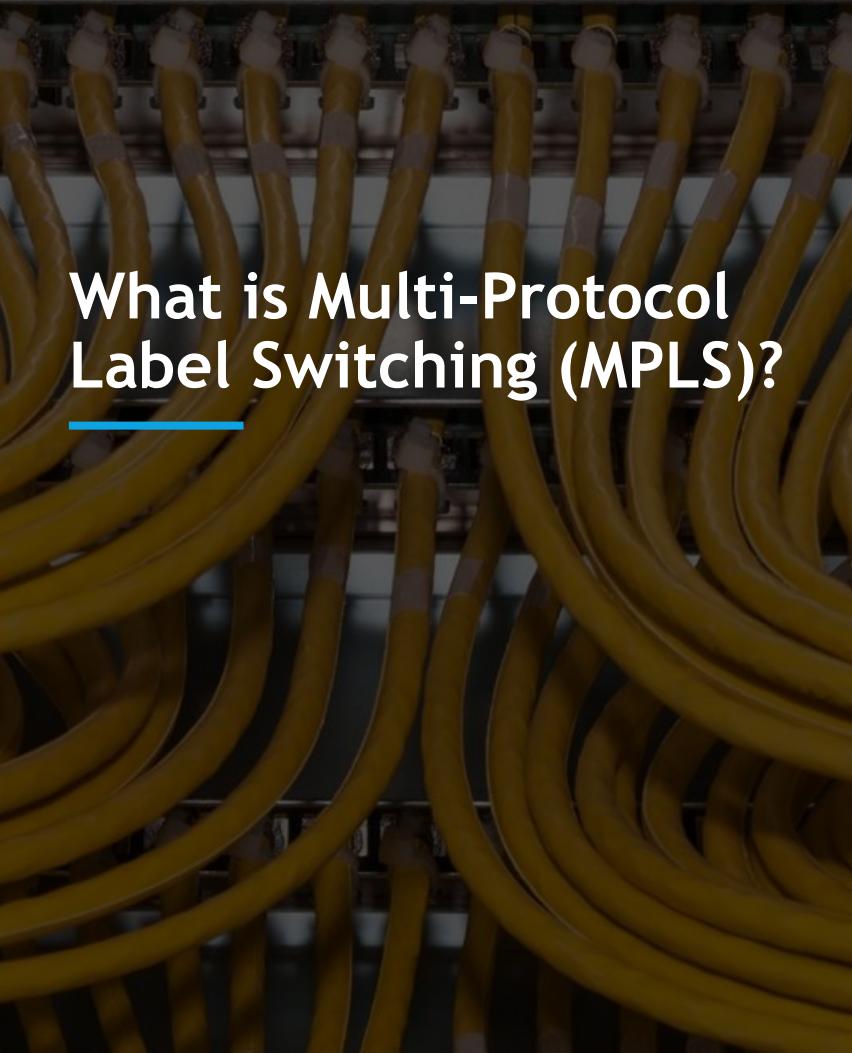


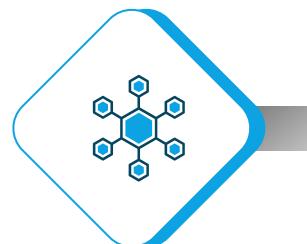


Multi-Protocol Label Switching (MPLS)

What is Multi-Protocol Label Switching (MPLS)?



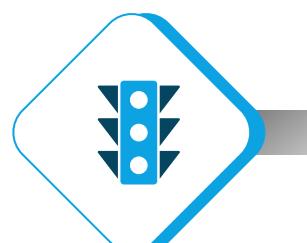
BSNL's MPLS is a high-performance networking technique that routes data **based on short labels instead of long network addresses**, ensuring secure, full-duplex site-to-site connectivity across a **private, internet-isolated network**



This type of routing reduces latency and ensures **data takes the most efficient path available**, resulting in **symmetrical bandwidth** and seamless inter-branch communication



BSNL's MPLS enables **traffic engineering (full-mesh topologies)** - network managers can set up **optimal paths for different types of traffic**



BSNL's MPLS can **prioritize traffic classes** enabling priority handling of time-sensitive applications, resulting in **lower jitter and smoother performance**

MPLS for Business

Why does your business need Multi-Protocol Label Switching (MPLS)? (1/2)

1



Secure & Predictable WAN Connectivity

- Unlike the public internet, your data travels on a private, dedicated network, enhancing security and control.
- It ensures predictable and reliable performance for critical applications like VoIP, video calls, and cloud collaboration.

2



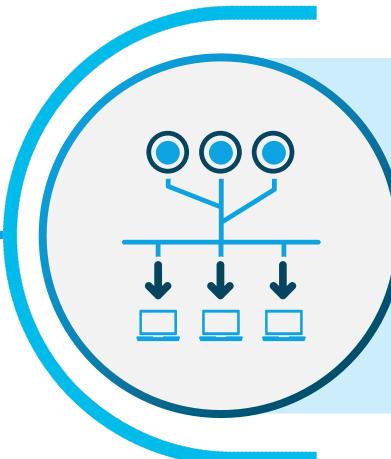
Better Performance for Real-Time Apps

- It intelligently prioritizes traffic and ensures optimal routing, guaranteeing smooth operation for real-time applications.
- This delivers consistent, high-quality performance for all real-time applications and smooth cloud communication.

MPLS for Business

Why does your business need Multi-Protocol Label Switching (MPLS)? (2/2)

3



Scalable & Centrally Manageable Networks

- Enables scalable any-to-any connectivity; new sites connect instantly.
- Supports data, voice, and video convergence on a single network.

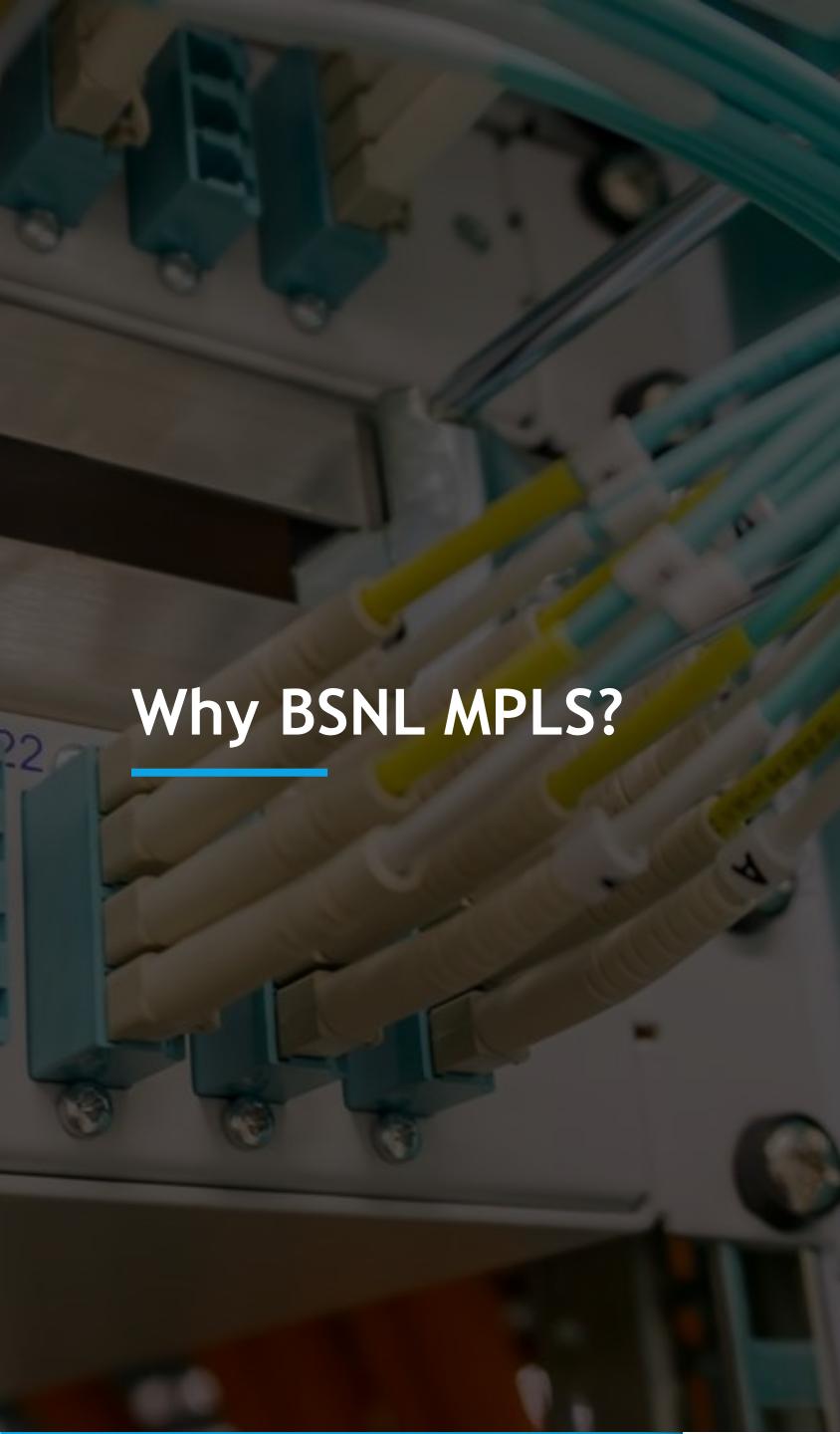
4



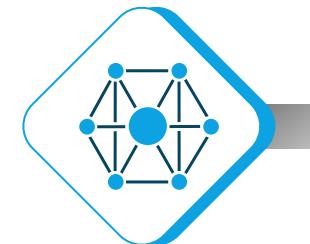
Guaranteed Uptime & SLA-Backed Resiliency

- Minimizes outages and speeds incident response for smooth operations.
- Instantly reroutes traffic upon path failure, requiring no manual intervention.

Why BSNL MPLS?



India's **first & largest MPLS-VPN network** with option to extend the same VRF globally



All **value-added features** like Layer 2/3 VPN, Full Mesh Topology, etc. **included or deeply discounted**

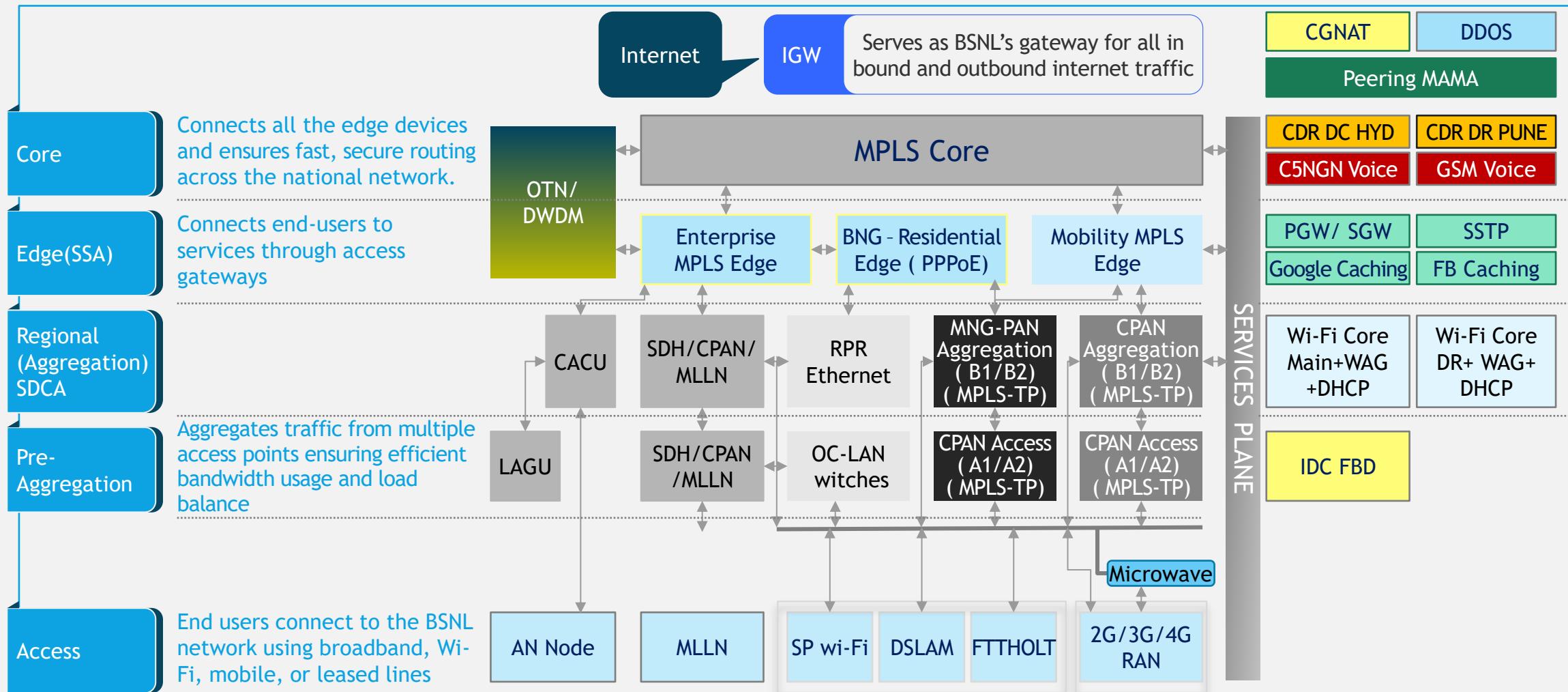


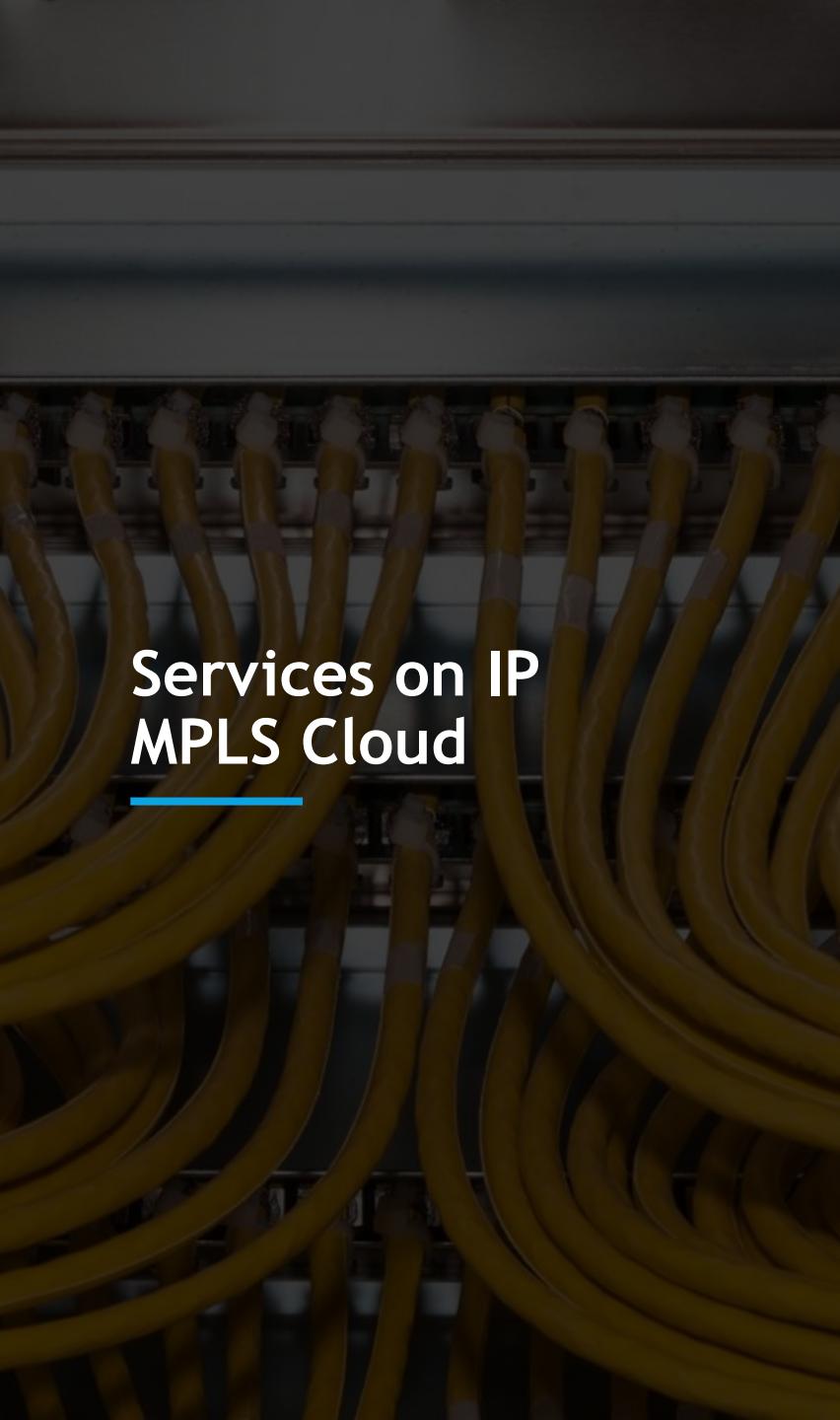
Single-point-of-contact for technical and commercial needs, backed by an **ISO 9001:2015-certified NOC**



Round-the-clock MPLS cloud monitoring with guaranteed uptime and rapid automated failover

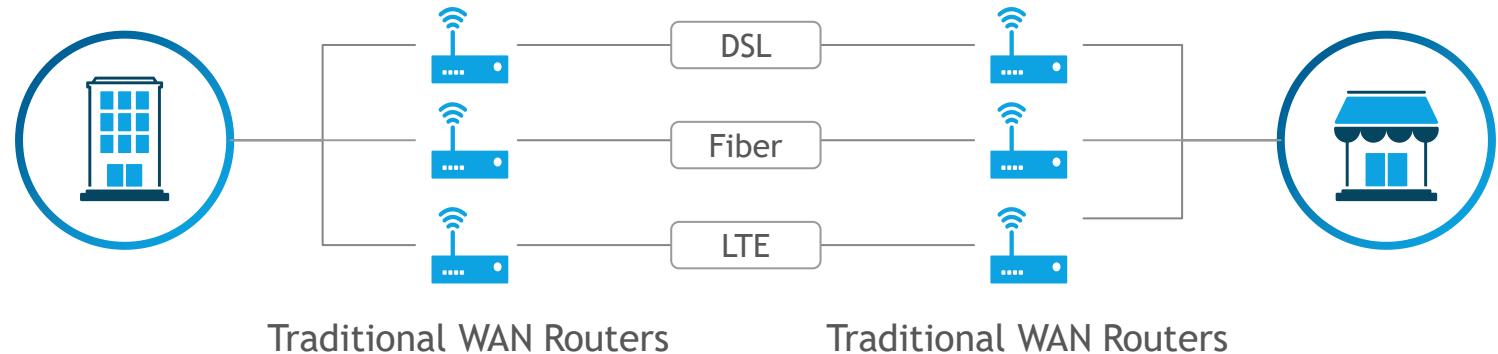
BSNL MPLS has a robust Network Architecture to boost connectivity





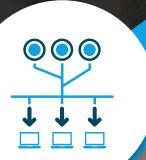
Services on IP MPLS Cloud

MPLS architecture



- ◊ MPLS (multiprotocol label switching): networking protocol to improve performance and efficiency of data transmission in a WAN
- ◊ Operates between Layer 2 (data link layer) and Layer 3 (network layer) of the OSI model
- ◊ MPLS routes traffic using “labels” that it assigns to a packet and controls the forwarding WAN path based on the shortest available
- ◊ A MPLS network works along **pre-defined network paths** using **specialized hardware routers** to be configured with predefined routing table

Services on IP MPLS Cloud



Diverse Service Offerings:

Supports multiplay, FTTH, BSNL Intranet, various VPNs (L2/L3, BBVPN, Global), NGN, GSM services, WiMAX, and IP Multicast

Robust VPN Solutions:

Provides ILL, Anti DDoS Protection, Hub&Spoke, Customer Portal, and QoS features alongside core VPN functionalities

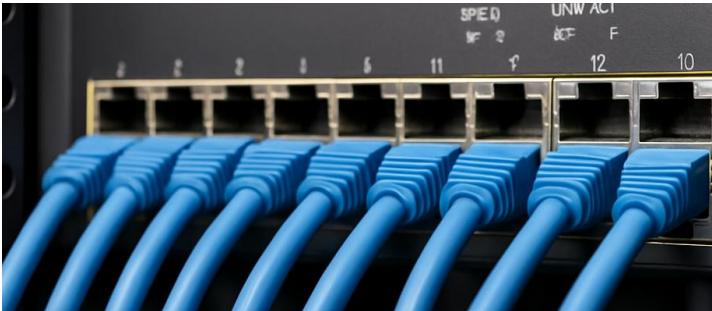
24x7 Monitoring & Rapid Response:

MPLS NOC in Bangalore offers continuous network monitoring and an expert BSNL team ensures swift resolution of hardware, cloud, and backbone link issues

Proactive Management &

Dedicated Team: Active management of network congestion, packet drops, and latency, backed by highly qualified BSNL staff and centralized AMC/OEM support from Bangalore

BSNL offers MPLS services in three categories based on committed bandwidth



MPLS Topaz

Standard, best effort QoS with cost optimized connectivity

25% CIR guaranteed during peak hours, with 100% bandwidth available at all other times.

Speeds ranging from 64 kbps up to 100 Gbps

Greater than 99% SLA uptime & 24x7 ISO 9001 NOC support



MPLS Emerald

Balanced QoS with traffic prioritization

50% CIR guaranteed during peak hours, with 100% bandwidth available at all other times.

Same bandwidth range with higher guaranteed share

SLA-backed performance & proactive monitoring



MPLS Gold

Premium QoS with ultra-low latency & jitter

100% of committed bandwidth is assured at all times.

Full line-rate performance guaranteed

Premium SLAs, rapid failover & global VRF option